

1-15. (CANCELED).

16. (CURRENTLY AMENDED) A speed measuring system for determining a speed of a measuring body rotating relative to a speed sensor comprising:

~~one of electric and magnetic discontinuities provided on a periphery of the measuring body, and the speed sensor, located at a defined distance from the measuring body, reacts to a direction of movement of the discontinuities situated on the measuring body as the measuring body is moved past the speed sensor;~~

~~wherein the speed measuring system further comprises a distance sensor for determining an actual distance and an actual change in distance between the speed sensor and the measuring body, and the speed of the measuring body is determined from an actual output signal of the speed sensor evaluated according to an actual output signal of the distance sensor in an evaluation device of the speed measuring system to improve reaction sensitivity of the speed sensor~~

a plurality of one of electric and magnetic discontinuities located on a periphery of the rotating measuring body,

a distance measuring surface located on the periphery of the rotating measuring body,

the speed sensor located at an air gap distance from the periphery of the rotating measuring body, wherein

the speed sensor is reactive to the plurality of one of electric and magnetic discontinuities during rotation of the rotating measuring body to provide at speed output signal representing rotation of the plurality of one of electric and magnetic discontinuities past the speed sensor and having an amplitude dependent upon an air gap distance between the speed sensor and the periphery of the rotating measuring body,

a distance sensor located next to the speed sensor for scanning the distance measuring surface and providing a distance output signal representing the air gap distance between the distance sensor and the distance measuring surface on the periphery of the rotating measuring body, and

an evaluation device for determining the speed of rotation of the rotating measuring body by determining when the amplitude of the speed output signal is one of greater than an upper release threshold and smaller than a lower release threshold, wherein

the upper and lower release thresholds are adjusted by the distance
output signal so that the upper and lower release thresholds are a function of the air
gap distance.

17. (CURRENTLY AMENDED) The speed measuring system according to claim 16, wherein ~~release thresholds of the speed sensor specific to at least one of the speed sensor and the measuring body are respectively a function of the actual distance between the speed sensor and the measuring body and a function of an actual change in distance between the speed sensor and the measuring body,~~ the evaluation device of the speed measuring system issues a speed unequal to a "zero" value, ~~as the actual speed of the measuring body;~~ only when an actual amplitude of the speed output signal amplitude of the speed sensor is greater than ~~[[an]]~~ the upper release threshold or smaller than ~~[[a]]~~ the lower release threshold.

18. (CURRENTLY AMENDED) The speed measuring system according to claim 16, wherein a maximum speed output signal amplitude ~~specific to the speed sensor~~ and a minimum speed output signal amplitude ~~specific to the measuring body~~ are respectively a function of the actual distance between the speed sensor and the rotating measuring body, and a change in the maximum speed output signal amplitude and the minimum speed output signal amplitude are respectively a function of the air gap distance between the speed sensor and the rotating measuring body and a change in the actual change in air gap distance between the speed sensor and the rotating measuring body, and the evaluation device of the speed measuring system issues a speed unequal to a "zero" value as an actual speed of the rotating measuring body only when an amplitude of the actual speed output signal amplitude of the speed sensor is smaller by one of a defined differential amount and a defined percent deviation ~~[[than]]~~ of the maximum speed output signal amplitude or is larger by a defined differential amount ~~[[than]]~~ of the minimum speed output signal amplitude.

19. (CURRENTLY AMENDED) The speed measuring system according to claim 16, wherein, when ~~[[an]]~~ as the air gap distance decreases, ~~[[an]]~~ the upper and a lower release thresholds and the maximum and minimum speed signal amplitudes are increased.

20. (CURRENTLY AMENDED) The speed measuring system according to claim 16, wherein the distance sensor scans, without contact, a contour of the measuring body as ~~[[a]]~~ the distance measuring surface.

21. (CURRENTLY AMENDED) The speed measuring system according to claim 16, wherein the speed sensor and the distance sensor are situated in a ~~common~~ sensor housing. ◆◆

22. (CURRENTLY AMENDED) The speed measuring ~~device~~ system according to claim 16, wherein the speed measuring system has two speed sensors disposed immediately adjacent one another which detect the one of the electric and magnetic discontinuities of the rotating measuring body independently of one another, and the evaluation device takes into account a phase offset between both speed sensor signals so that the speed measuring system delivers, as an output, at least one of the speed, a direction of rotation and an angularity of the rotating measuring body. ◆◆

23. (CURRENTLY AMENDED) The speed measuring system according to claim 22, wherein ~~[[both]]~~ the two speed sensors and the distance sensor are situated in a ~~common~~ sensor housing. ◆◆

24. (PREVIOUSLY PRESENTED) The speed measuring system according to claim 17, wherein the upper and lower release thresholds and maximum and minimum speed amplitudes are stored as sensor-specific characteristic lines in the evaluation device of the speed measuring system.

25. (CURRENTLY AMENDED) The speed measuring system according to claim 24, wherein the sensor-specific characteristic lines are adaptable according to the distance output signal and are a function of the air gap distance. ◆◆

26. (CURRENTLY AMENDED) The speed measuring ~~device~~ system according to claim 16, wherein the evaluation device of the speed measuring system is integrated in a sensor housing. ◆◆

27. (PREVIOUSLY PRESENTED) The speed measuring system according to claim 16, wherein the evaluation device of the speed measuring system is situated in a separate control unit.

28. (CURRENTLY AMENDED) The speed measuring ~~device~~ system according to claim 16, wherein the distance sensor works according to one of an inductive measuring principle, a magnetic-resistive measuring principle, an optical measuring principle and a Hall measuring principle. ◆◆

29. (CURRENTLY AMENDED) The speed measuring system according to claim 16, wherein the speed sensor works according to a measuring principle in which ~~[[a]]~~ the speed output signal amplitude depends on the distance between the speed ◆◆

sensor and the rotating measuring body.

30. (PREVIOUSLY PRESENTED) The speed measuring system according to claim 29, wherein the distance sensor works according to one of an inductive measuring principle, a magnetic-resistive measuring principle, an optical measuring principle and a Hall measuring principle.

31. (CURRENTLY AMENDED) A speed measuring system comprising:

at least one stationary speed sensor for detecting speed of a measuring body rotating relative to the at least one stationary speed sensor in which one of electric and magnetic discontinuities are provided on a periphery of the measuring body, and the speed sensor, located at a defined distance from the measuring body, reacts to a direction of movement of the discontinuities situated ~~[[of]]~~ on the measuring body as the measuring body is moved past the speed sensor by generating a speed output signal representing the movement of the measuring body past the speed sensor; and

~~the speed measuring system further comprising~~ a distance sensor located at a predetermined location with respect to the speed sensor for determining an actual distance between the speed sensor and the measuring body and generating a distance output signal representing the actual distance between the distance sensor and the measuring body, the actual distance between the distance sensor and the measuring body representing an actual distance between the speed sensor and the measuring body and a ~~an~~ actual change in the distance between the speed sensor and the measuring body representing a change in the distance between the speed sensor and the measuring body, and ~~[[said]]~~ a change in the distance output signal representing a change in the distance between the speed sensor and the measuring body being distance information is constantly used to adapt release thresholds of the at least one stationary speed sensor that are specific to the speed sensor relative to ~~[[the]]~~ a change in an actual air gap between the measuring body and the speed sensor.

32. (CURRENTLY AMENDED) A speed measuring system for determining a speed of a measuring body rotating relative to a speed sensor comprising:

one of electric and magnetic discontinuities provided on a periphery of the measuring body, ~~[[and]]~~

the speed sensor~~[[,]]~~ being located at a defined distance from the measuring body, ~~reacts and reacting~~ to a direction of movement of the discontinuities situated on the measuring body as the measuring body is moved past the speed

sensor[1,2] to generate a speed output signal representing movement of the measuring body past the speed sensor.

~~the speed measuring system comprises~~ a distance sensor located at a predetermined location relative to the speed sensor for determining an actual distance between the distance sensor and the measuring body and generating a distance output signal representing an actual change in distance between the speed sensor and the measuring body wherein a change in the distance output signal represents a change in the actual distance between the speed sensor and the measuring body, and wherein

[[the]] an actual speed of the measuring body is determined from an measured the speed output signal of the speed sensor adapted by evaluated according to an actual the distance output signal of the distance sensor in an evaluation device of the speed measuring system to improve reaction sensitivity of the speed sensor; and

wherein a maximum speed output signal amplitude specific to the speed sensor and a minimum speed output signal amplitude specific to the measuring body are respectively a function of the actual distance between the speed sensor and the measuring body, and a function of ~~the actual~~ a change in actual distance between the speed sensor and the measuring body, and the evaluation device of the speed measuring system issues a speed unequal to a "zero" value as [[an]] the actual speed of the measuring body only when an actual the speed output signal amplitude of the speed sensor is smaller by one of a defined differential amount and a defined percent deviation [[than]] of the maximum output speed signal amplitude or is larger by a defined differential amount [[than]] of the minimum output speed signal amplitude.

33. (CURRENTLY AMENDED) The speed measuring system according to claim 32, wherein release thresholds ($S_{[-]}$, S_u) of the speed sensor (4) specific to at least one of the speed sensor and [[/or to]] the measuring body are respectively function of the actual distance (LS) between the speed sensor (4) and the measuring body (1) and a function of an actual change in distance between the speed sensor (4) and the measuring body (1), the evaluation device of the speed measuring system issues a speed unequal to the "zero" value, as the actual speed of the measuring body (1), only when an actual speed signal amplitude of the speed sensor (4) is greater than an upper release threshold (S_o) or smaller than a lower release threshold (S_u).

34. (CURRENTLY AMENDED) The speed measuring system according to claim 33, wherein the actual distance between the speed sensor and the measuring body represents an air gap between the speed sensor and the measuring body and, when an air gap decreases, the upper and lower release thresholds (S_o , S_u) and the maximum and minimum speed signal amplitudes (A_{max} , A_{min}) are increased.

35. (NEW) The speed measuring system according to claim 33, wherein the upper and lower release thresholds (S_o , S_u) and the maximum and minimum speed amplitudes (A_{max} , A_{min}) are stored as specific characteristic lines in the evaluation device of the speed measuring system.